

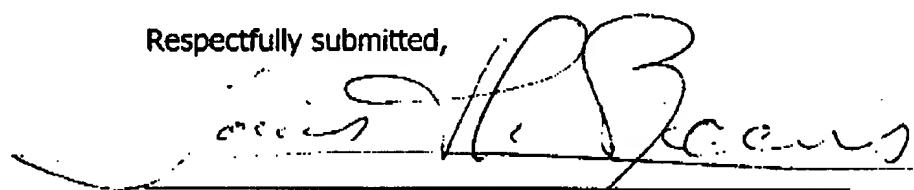
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Remarks

This second preliminary amendment is presented to claim priority of another co-pending prior United States patent application by virtue of International Patent Application PCT/US00/27113 in which the United States was designated. In accordance with 35 USC 363 the filing of the '27113 International application has the effect of a regular national filing on September 28, 2000.

In addition, a claim 22 covering subject matter related to this co-pending '27113 International Patent Application is filed herewith and is based upon subject matter described on Page 7 in this patent application. This subject matter directly describes and, as stated on Page 7, is related to both United States provisional patent application No. 60/156,407 and the filing of a corresponding United States Patent application on September 28, 2000, which is the '27113 International application mentioned above.

Respectfully submitted,


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Version with Markings to Show Changes Made to the Paragraphs

On page 1, please insert the following paragraph after Prior Applications:

Applicants claim priority based upon copending International Patent Application PCT/US00/27113, entitled "Atmospheric Process And System For Controlled And Rapid Removal of Polymers From High Depth To Width Ratio Holes", bearing an international filing date of 28 September, 2000, published in English on 5 April, 2001 and designating the United States and further having been filed by the same inventors and assigned to the same assignee as of this patent application.

On pages 7 and 8, please replace the paragraph beginning on line 13 with the following paragraph:

In a previously patent application of ours, which is not prior art as to the invention described herein, for processing by a hot gas generated by an atmospheric plasma, an etch application is described. This patent application is United States Provisional Patent application No. 60/156,407 entitled "Atmospheric process and system for controlled, rapid removal of polymers from high depth to width aspect ratio holes," by inventors Bollinger and Tokmouline, filed September 28 1999 and assigned to the same assignee as for this invention. This patent application has been incorporated as part of a regular U.S. patent application filed September 28, 2000 by virtue of International Patent Application PCT/US00/27113, entitled "Atmospheric Process And System For Controlled And Rapid Removal of Polymers From High Depth To Width Ratio Holes", having a filing date of 28 September, 2000 and designating the United States. Heat flux to the substrate in that application is typically in the range of 10^6 – 10^7 W/m². Exposure times may typically be ~50ms but in a given application the exposure time may significantly vary. For etch applications, an objective is uniform net removal of material from the substrate. Since reaction rates can vary with temperature, exposure times may be adjusted significantly to compensate. Also, in etch applications the substrate should not

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be significantly heated, e.g., surface temperatures should be less than about 200°C, since the processing may be done on devices further along in the manufacturing steps where the device materials may be damaged by a high temperature.

Version with Markings to Show Changes Made to the Claims

Please insert the following claim 22:

22. A substrate etching method for removing a polymer from a substrate having high depth to width aspect ratio holes, comprising the steps of:
directing an atmospheric plasma hot gas having a heat flux in the range from 10⁶ to 10⁷ W/m² for a controlled rapid removal of a polymer from a high depth to width ratio hole in the substrate and varying the exposure time of the substrate to the hot gas to obtain a uniform net removal of polymer material from high depth to width aspect ratio holes in the substrate.